

Intel Nehalem-EX and Oracle workload tests

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Eric Grancher

with input from Anton Topurov, Dawid Wojcik,
Luca Canali, Mariusz Piorkowski



CERN
openlab

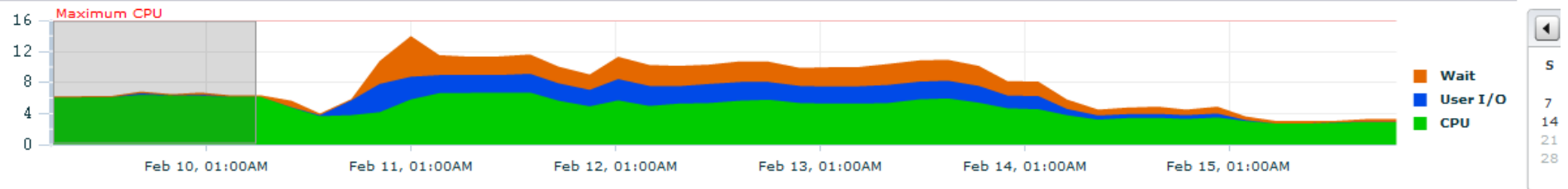
- **Oracle Workload**
- **Tests**
- **Future usage**

- CPU wise!
- Characteristics of Oracle workload
 - Logical IO
 - Latching
 - Memory transfer
 - Sorting
 - Loops and other PL/SQL work

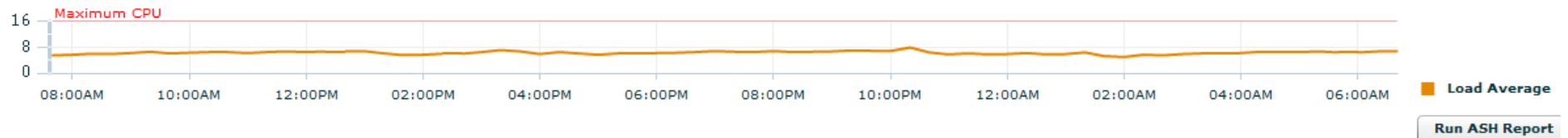


ACCMEAS database workload (1/2)

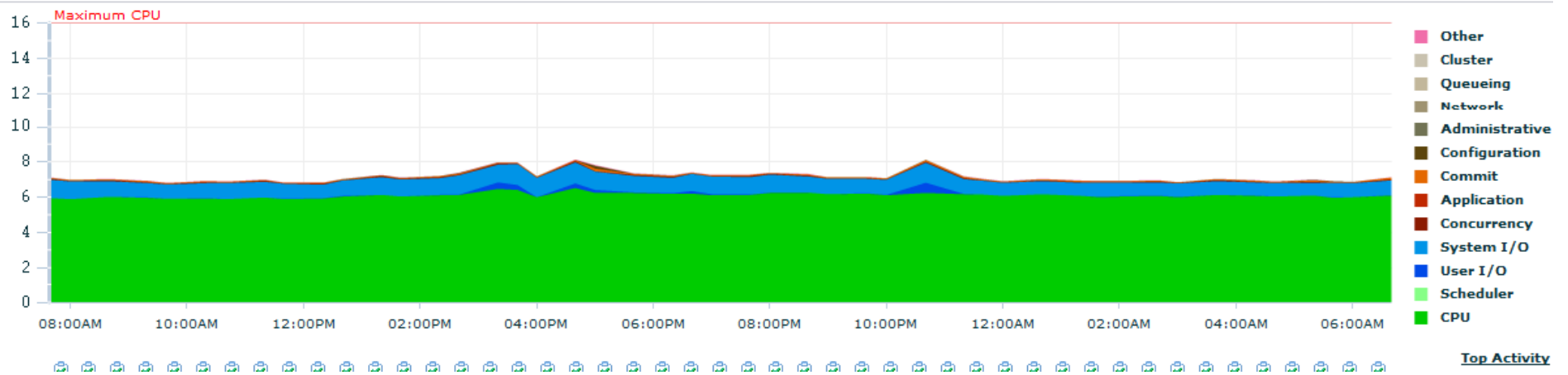
Average Active Sessions - 7 Day View



Host: Runnable Processes



Average Active Sessions





ACCMEAS database workload (2/2)

DB Name	DB Id	Instance	Inst num	Release	RAC	Host
ACCMEAS	934306562	ACCMEAS3	3	10.2.0.4.0	YES	dbsrva251.cern.ch

	Snap Id	Snap Time	Sessions	Cursors/Session
Begin Snap:	44960	10-Feb-10 00:00:29	114	6.7
End Snap:	44961	10-Feb-10 00:20:19	113	6.8
Elapsed:		19.83 (mins)		
DB Time:		131.21 (mins)		

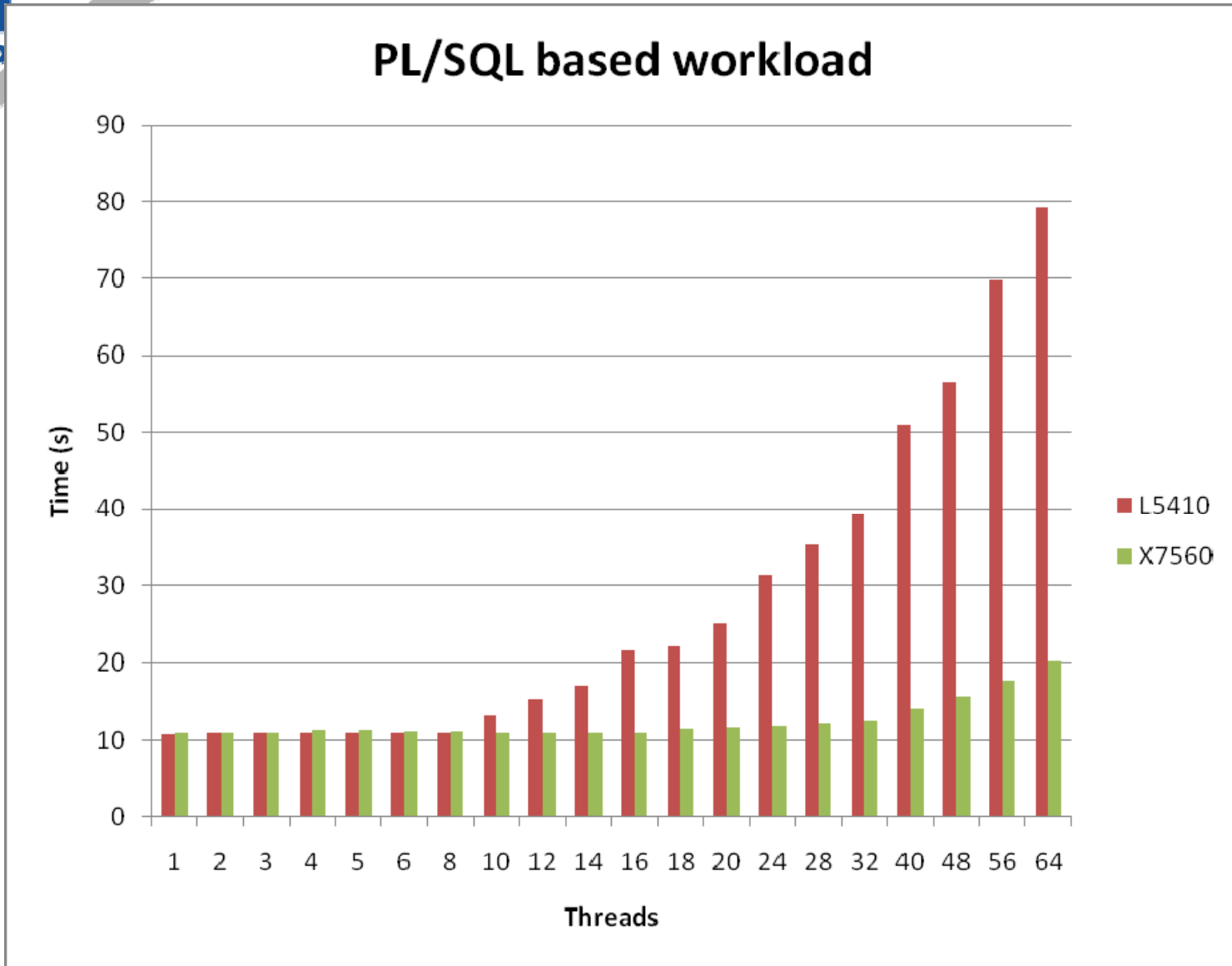
Report Summary

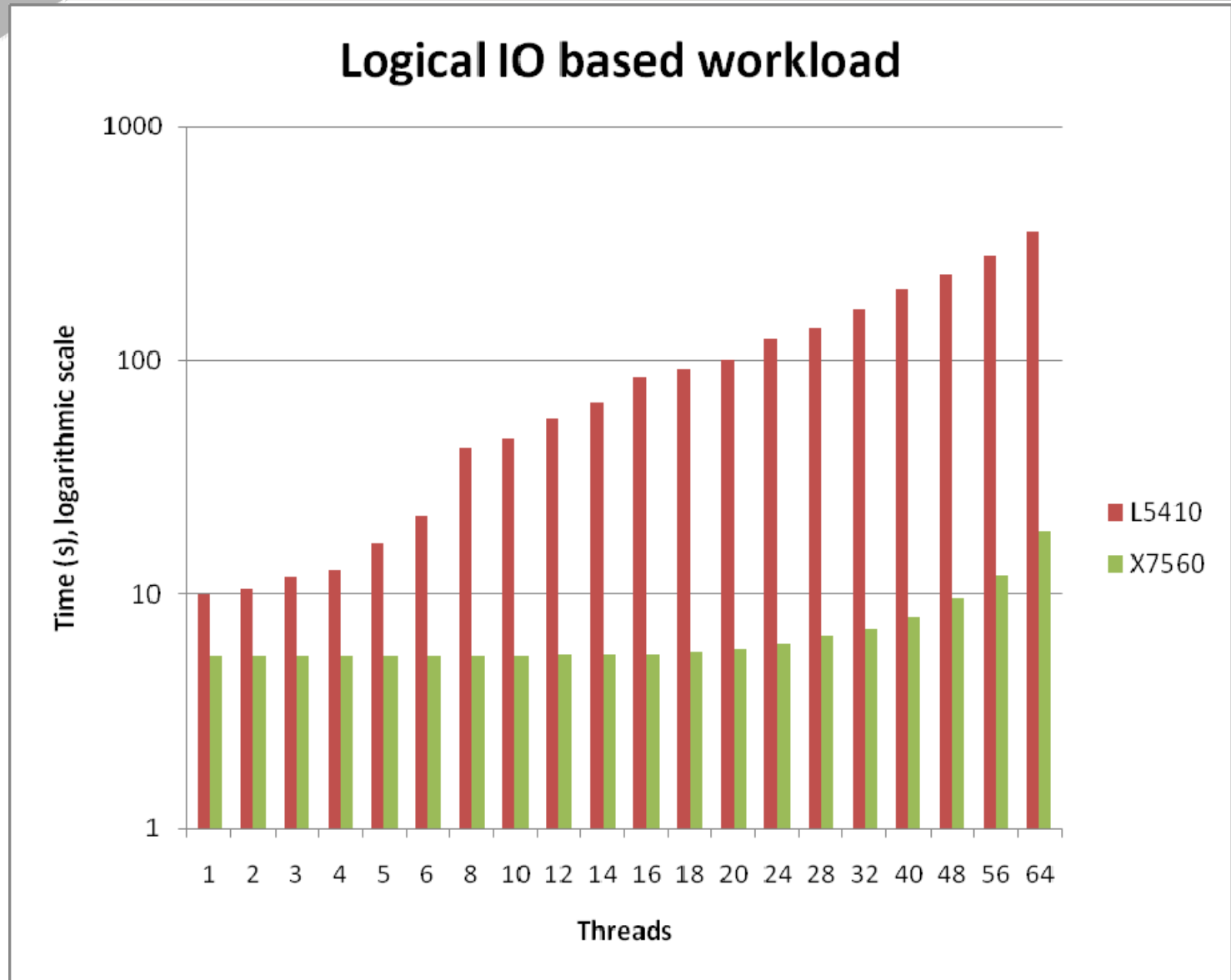
Cache Sizes

	Begin	End		
Buffer Cache:	16,384M	16,384M	Std Block Size:	8K
Shared Pool Size:	2,048M	2,048M	Log Buffer:	43,044K

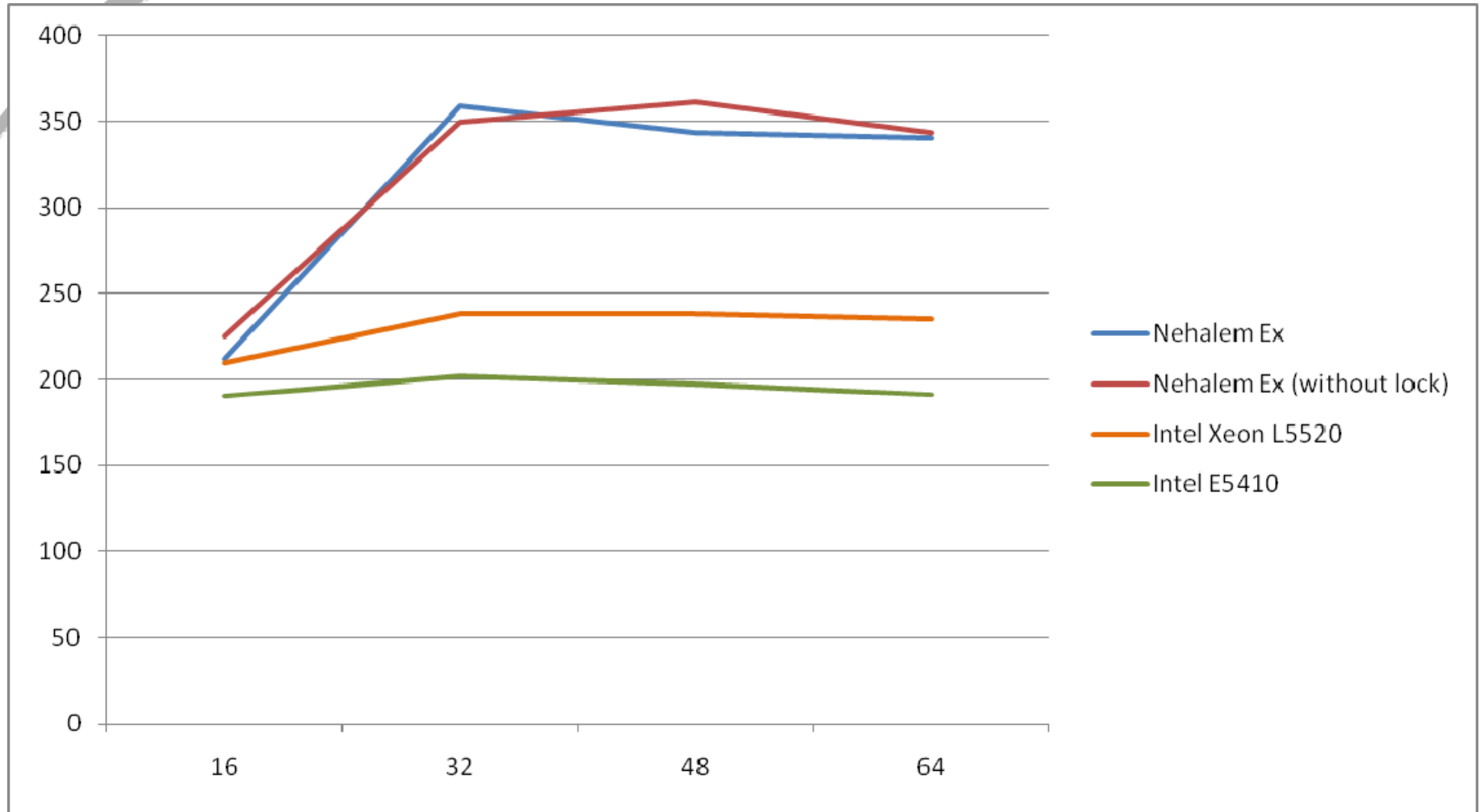
Top 5 Timed Events

Event	Waits	Time(s)	Avg Wait(ms)	% Total Call Time	Wait Class
CPU time		7,614		96.7	
db file parallel write	142,836	503	4	6.4	System I/O
log file parallel write	14,400	378	26	4.8	System I/O
buffer busy waits	226,447	91	0	1.2	Concurrency
log file sync	3,351	70	21	.9	Commit

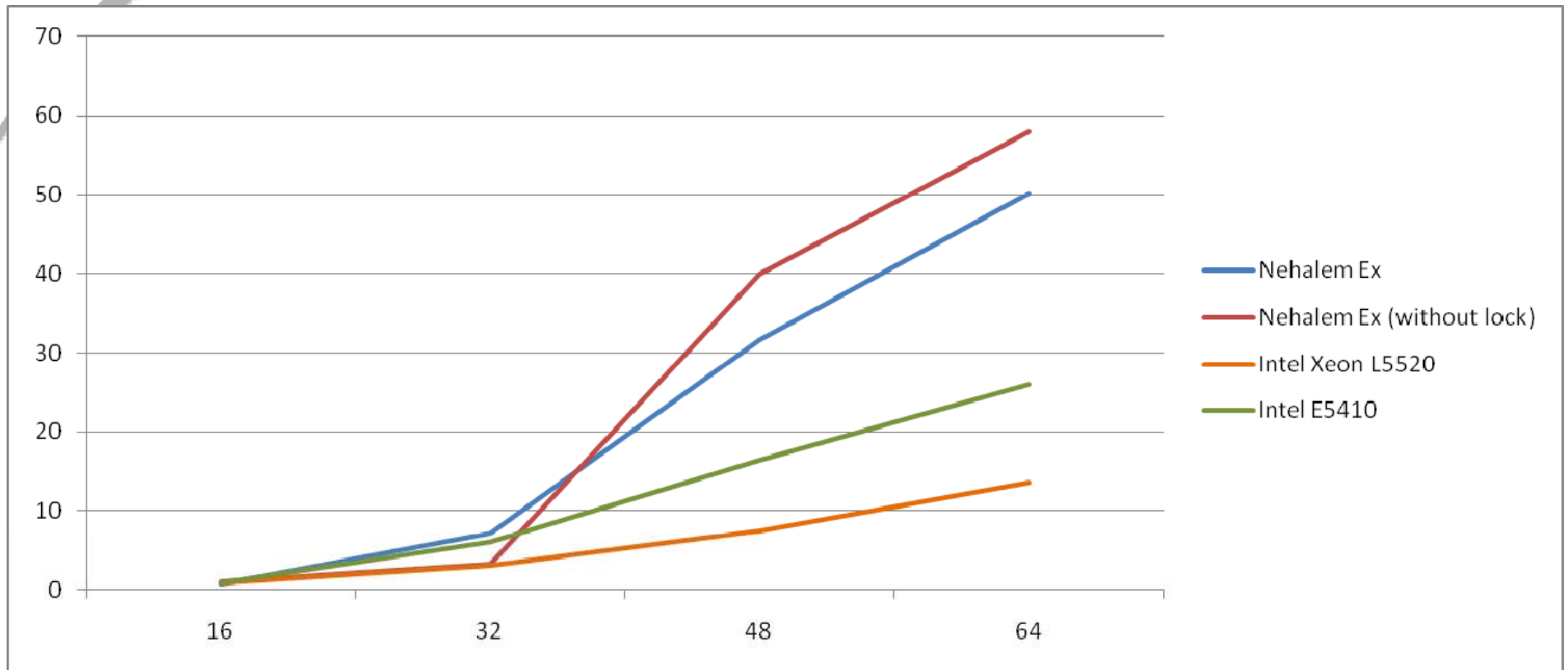


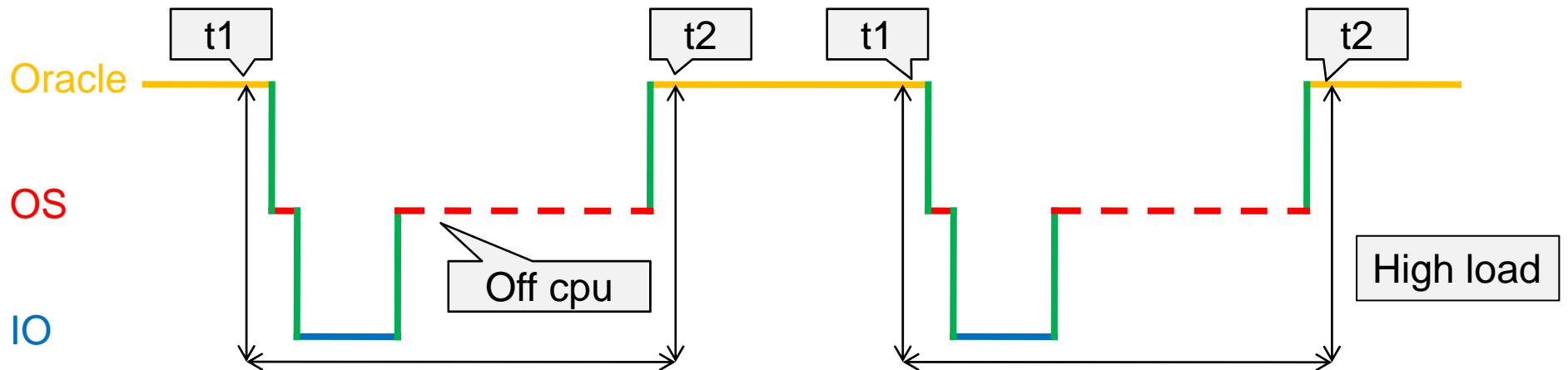
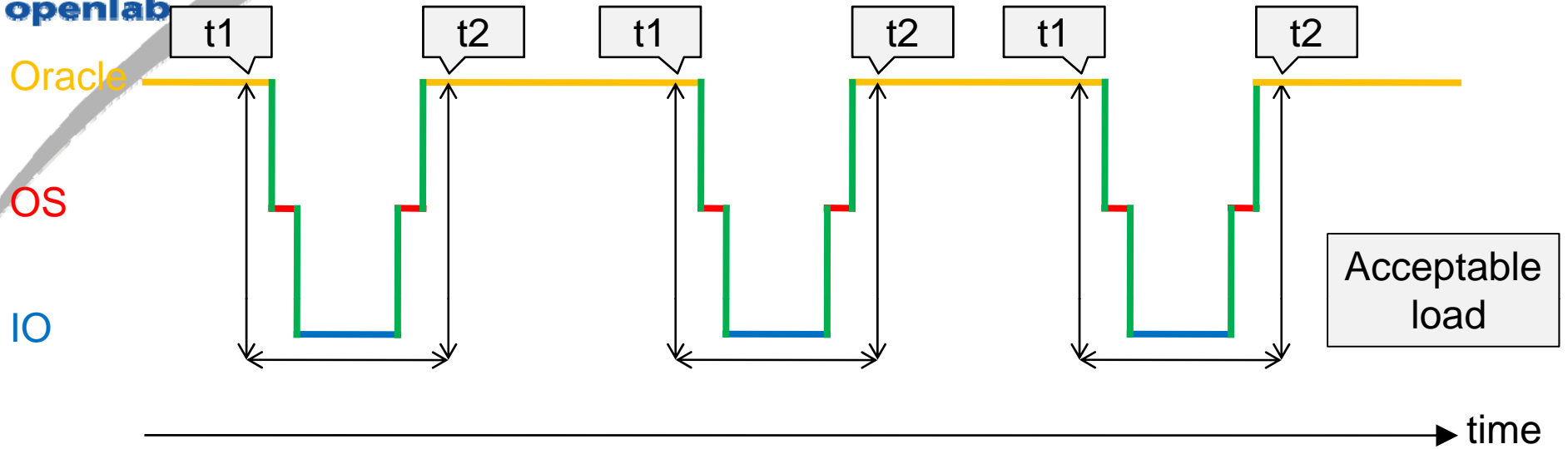


Number of transactions per second



Latch cache buffer chains







Future work and usage

- Compare with Xeon 7400 (Dunnington)
- Scaling database applications
- Change database workload (compression)
- Virtualisation of databases